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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,112	09/28/2005	Susumu Yasuda	03500.017988.	4322

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EXAMINER	
BENSON, WALTER	
ART UNIT	PAPER NUMBER
2858	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/551,112	YASUDA ET AL.	
	Examiner	Art Unit	
	Walter Benson	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-28 and 30-32* is/are rejected.

7)☒ Claim(s) *29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 September 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/06/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

FINAL ACTION

1. Amendment A, received on 11/06/2006, has been entered into record.

2. Claims 17-32 are pending in this application.

3.

Drawings

4. Figures 9-11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 27, 30, and 32 are objected to because of the following informalities:

i. in claim 27, lines 9 and 11, it is unclear what is meant by "exposes the first/second detection electrode *wide*r to the potential-measure object";

ii. in claim 30, lines 11 and 13, , it is unclear what is meant by "exposes the first/second detection electrode *wide*r to the potential-measure object...";

iii. in claim 30, line 8, it is unclear what is meant by "exposed to a potential-measured object *wide*r when the..." and line 10, "exposed to a potential-measured object *narrower* when the...";

iv. in claim 32, line 5, it is unclear what is meant by "first electrode exposed *wider* when the movable shutter ...; and line 6, by "second electrode exposed *narrower* when the movable shutter ...;

6. . Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 17-28 and 30-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Yasuda et al. (US Patent No. 6,965,239).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37

CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

3. As to claim 17, Yasuda discloses a potential sensor comprising:

first and second detection electrodes opposed to a potential-measured object a potential of which is to be measured (col. 3, lines 57-59 and col. 5, lines 35-38);

a movable shutter positioned between the detection electrodes and the potential-measured object with gaps thereto (col. 5, lines 39-44);

where the movable shutter is configured to assume a first state and a second state, the first detection electrode being entirely exposed and the second detection electrode being entirely masked when the movable shutter assumes the first state [col. 5, lines 65-67 and col. 6, lines 1-5), and the first detection electrode being entirely masked and the second detection electrode being entirely exposed when the movable shutter assumes the second state (col. 5, lines 8-18).

4. As to claim 18, Yasuda discloses a potential sensor comprising:

where the movable shutter is elastically supported to be movable between the first state and the second state (col. 3, lines 47-50 and 57-59).

5. As to claim 19, Yasuda discloses a potential sensor comprising:

where a drive frequency of the potential sensor is substantially equal to a mechanical resonance frequency of the movable shutter. (col. 9, lines 1-4).

6. As to claim 20, Yasuda discloses a potential sensor comprising:

where the movable shutter is configured to be controlled by magnetic-field generation means, which generates a magnetic field substantially perpendicular to a movable direction of said movable shutter, and current application means, which supplies said movable shutter with a current substantially perpendicular to the movable direction of said movable shutter and to a direction of the magnetic field, thereby causing the movable shutter to assume the first state and the second state (col. 3, lines 21-26).

7. As to claim 21, Yasuda discloses a potential sensor comprising:

where the magnetic field generation means is a permanent magnet or an electromagnetic coil (col. 3, lines 26-27).

8. As to claim 22, Yasuda discloses a potential sensor further comprising:

one or more addition movable shutters and at least one additional current application means, which supplies said movable shutters with currents substantially perpendicular to the moving directions of the movable shutters, whereby the first state and the second state are assumed by an interaction of the currents supplied to the movable shutters (col. 3, lines 30-36).

9. As to claim 23, Yasuda discloses a potential sensor comprising:

where the first and second detection electrodes are disposed adjacent each other at an interval so as not to short electrically (col. 8, lines 1-3).

10. As to claim 24, Yasuda discloses a potential sensor comprising:

where the shutter is comprised of an actuator (col. 3, lines 6-9).

11. As to claim 25, Yasuda discloses a potential sensor comprising:

plural detection electrodes disposed adjacent each other (col. 4, lines 7-9);

plural movable shutters each of which is individually actuated to mask or expose the plural detection electrodes selectively, at least one of the plural movable shutters being activated so as to expose a first detection electrode of the plural detection electrodes and mask a second detection electrode of the plural detection electrodes, which is adjacent to the first detection electrode, at a first state, and so as to expose the second detection electrode and mask the first detection electrode at a second state (col. 3, lines 62-67 and col. 4, lines 1-7).

12. As to claim 26, Yasuda discloses a potential sensor comprising:

where the plural movable shutters include three or more movable shutters arranged in a juxtaposition such that a movable shutter not located on an edge of the juxtaposition masks at least one of the plural detection electrodes in the first state or the second state (col. 4, lines 31-35).

13. As to claims 27, 30, and 32, Yasuda discloses a potential sensor comprising:

a substrate (col. 4, line 14);

first and second detection electrode assemblies provided on the substrate, at least one of

the assemblies being formed in plural parts (col. 4, lines 14-17);

a movable shutter provided between the detection electrode assemblies with a gap thereto (col. 4, lines 17-19);

where the first detection electrode assembly is exposed to a potential-measured object wider when said movable shutter assumes a first state than when said movable shutter assumes a second state, and the second detection electrode assembly is exposed to the potential-measured object narrower when said movable shutter assumes the first state than when said movable shutter assumes the second state (col. 4, lines 20-26);

further as to claim 32, Yasuda teaches a step of switching the movable shutter between the first state and the second state, and measuring a potential of the potential-measured object based on a change in an electrostatic capacitance generated between the first and second electrodes and the potential-measured object (col. 7, lines 17-23).

14. As to claim 28, Yasuda discloses a potential sensor comprising:

where in the plurality of sensor units at least two detection electrodes exposed and at least two detection electrodes masked to the potential-measured object respectively in the first state of the movable shutters are electrically connected to each other, respectively (col. 6, lines 45-52).

15. As to claim 31, Yasuda discloses a potential sensor comprising:

a potential sensor according to claim 17; and image forming means configured to control an image formation based on an output of said potential sensor (col. 4,lines 37-41).

Allowable Subject Matter

16. Claim 29 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

17. Applicant's arguments, see Remarks, filed 11/06/2006, with respect to claim 29 has been fully considered and are persuasive. The rejection of claim 29 has been withdrawn.

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter Benson whose telephone number is (571) 272-2227. The examiner can normally be reached on Mon to Fri 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Walter Benson
Walter Benson
Primary Examiner